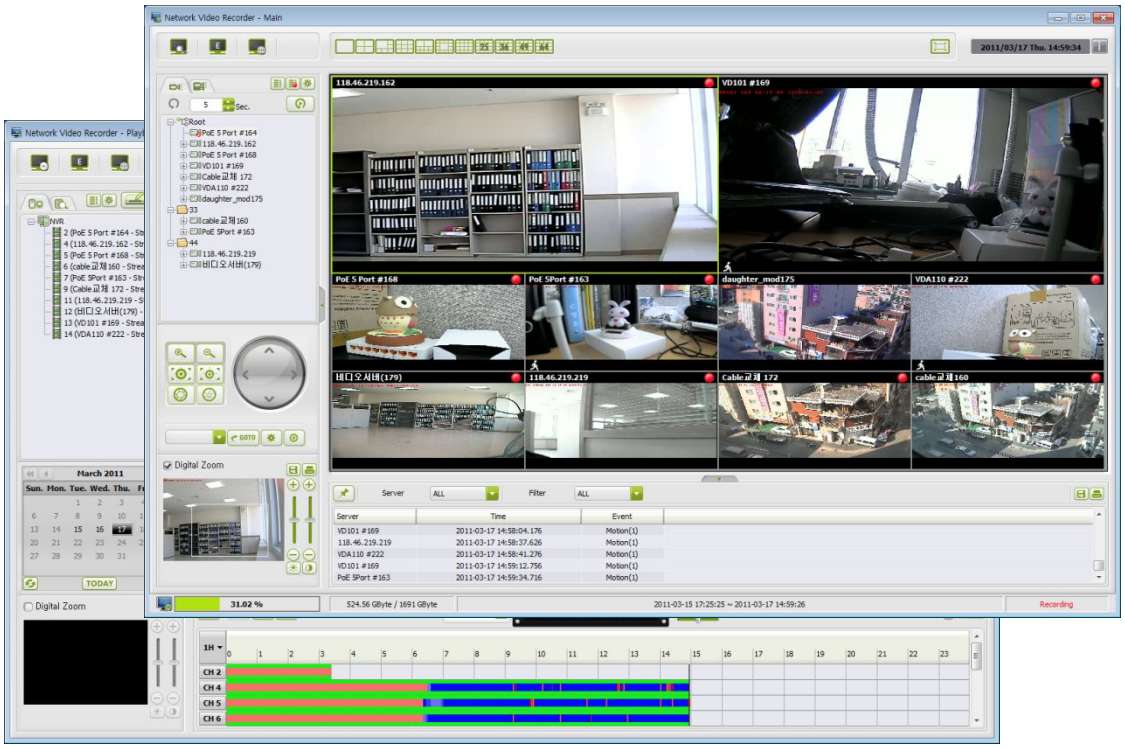
NETWORK VIDEO RECORDER C/S

USER MANUAL



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INDEX

1. Feature Overview 4
2. Minimum System Requirements 4
3. Detailed Product Features 4
   - 3.1. NVR CS Server 4
   - 3.2. NVR Client Live 5
   - 3.3. NVR Client Playback 5
   - 3.4. NVR Client E-map 5
   - 3.5. NVR Client Setup 5
4. Program Installation 6
   - 4.1. Running Installation file 6
   - 4.2. License Agreement 6
   - 4.3. Choose Components 6
   - 4.4. Registering NVR Server in the Windows Startup program. 7
   - 4.5. Installation Completion 7
5. NVR Server/ Watchdog 8
   - 5.1. User Interface 8
6. NVR Client Live 9
   - 6.1. User Interface 9
     - 6.1.1. Status Window and Server List 10
     - 6.1.2. Program Icons 12
     - 6.1.3. Display Mode 12
     - 6.1.4. Display Screen 13
     - 6.1.5. PTZ Control 13
     - 6.1.6. Time Line & PTZ Panorama 14
     - 6.1.7. Login Information 16
   - 6.2. Server/Group List and Display Menu 17
     - 6.2.1. Server List Menu 17
     - 6.2.2. Group List Menu 17
     - 6.2.3. Display Screen Menu 17
     - 6.2.4. Group Main Menu 18
7. NVR Client Playback 19
   - 7.1. User Interface 19
8. NVR Client E-Map 20

8.1. User Interface 20
8.2. E-map Group 21
8.2.1. To add E-map Group 21
8.2.2. To edit E-map Group 21
8.2.3. To lock or unlock E-map Group 21
8.2.4. To open/ delete E-map 21
8.3. E-map Items 22
8.3.1. To add items to E-map 22
8.3.2. To edit/delete items on the E-map 22
8.3.3. To save items to E-map 22
9. NVR Client/Server Setup 23
9.1. User Interface 23
9.2. NVR Information (Root) 23
9.3. User List (User List) 24
9.4. Server List (Server list) 24
9.5. NVR Sever 25
9.5.1. System Information (VISION-PC) 25
9.5.2. Log Viewer(Log Viewer) 25
9.5.3. DB Drive Setting (DB Drive Setting) 26
9.5.4. User List of NVR Server (User List) 27
9.6. Camera 28
9.6.1. Adding IP Devices (Camera & Video Servers) 28
9.6.2. Camera Setup 29
9.6.3. DB Recording Channel Setup 29
9.6.4. Motion Setup 30
10. NVR Client Event Viewer 31
10.1. User Interface 31
10.2. Setup Event Viewer 32

Network Video Recorder C/S is IP Video management software. It is widely used as a monitoring and recording system for small and midsize installation. And, because of Client/Server architecture, it can manage unlimited record server systems.

1. Feature Overview

Key features / Package	16	36	64	Unlimited
Number of cameras per recording server	16	36	64	64
Multi server solution	No	No	No	Yes
Number of servers	1	1	1	Unlimited
Number of cameras per NVR Client Live	16	36	64	128
Number of cameras per NVR Client Playback	16	36	64	64
Maximum numbers of users	1	5	5	32
Alarm Manager	Yes	Yes	Yes	Yes
Map function	Yes	Yes	Yes	Yes
Watchdog	Yes	Yes	Yes	Yes

2. Minimum System Requirements

System requirements	NVR CS Server	NVR CS Client
CPU	Pentium Core2 duo 2.4	Pentium i3-3220 3.3GHz or higher
Graphic Card	128MB	128MB
Ram	2GB	2GB or higher
O/S	Windows 7	Windows 7
Network	Gigabit LAN	Gigabit LAN
HDD	Minimum 1GB Free	Minimum 1GB Free

3. Detailed Product Features

3.1. NVR CS Server

Function	Description
Recording Server	Saves transmitted video stream from IP cameras
	Intelligent recording functions (Scheduling, Event Recording)
Relay Server	Relays video streams or events from IP cameras to the Client
Two way Audio Server	Transmits client's audio data to Camera
User Management	Manages the user group and the privilege of the user group
Watchdog	Monitors Recording Servers periodically and maintains stable recording operations.

3.2. NVR Client Live

Function	Description
Real-time Monitoring	Performs real-time monitoring of Max. 128 channels by remote access to Recording servers or IP Cameras.
Unlimited Server System	Provides unlimited server system by remote management of recording servers of IP Cameras
Quick Search	Provides up to x16 playback speed of recording data by each camera of Recording Server.
P/T/Z Control	Controls Pan/Tilt/Zoom of IP Camera.
Backup	Provides AVI file of Video Backup.
Panorama Control	Creates 360 degree panorama image of PTZ Camera and Controls the position of PTZ camera.
Display	Provides various screen modes (1/4/6/9/10/13/16/25/36/49/64ch)
Dual Monitoring	Supports Dual monitoring of up to 128 channels.

3.3. NVR Client Playback

Function	Description
Remote Search	Provides up to x16 playback speed of recording data by each camera of Recording Server.
Display	Provides various screen modes (1/4/6/9/10/13/16/25/36/49/64ch)
Backup	Provides AVI file of Video Backup.
Digital Zoom	Provides digital zoom in playback mode

3.4. NVR Client E-map

Function	Description
E-map management	Provides unlimited number of E-map pages
Event Link	Supports various event notifications when event triggered.
User-friendly Interface	Provides User-friendly interface of Drag&Drop setting

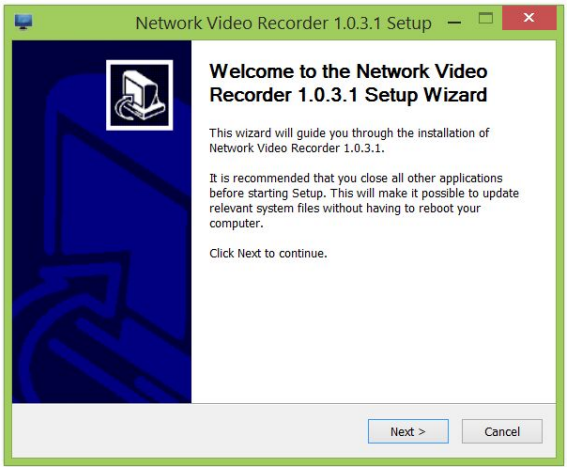
3.5. NVR Client Setup

Function	Description
Remote Setup	Sets the functions of Recording Servers and IP Cameras remotely.
Log View	Displays the list of Event information of IP Cameras registered on the NVR Server.

4. Program Installation

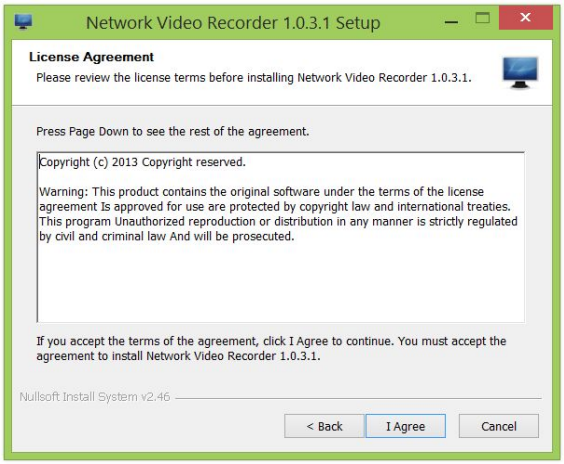
4.1. Running Installation file

1) Run the NVR_CS_Install_xx.exe file in the provided CD or in the folder of your PC.
2) Click “Next” button to continue.


Network Video Recorder 1.0.3.1 Setup
Welcome to the Network Video Recorder 1.0.3.1 Setup Wizard
This wizard will guide you through the installation of Network Video Recorder 1.0.3.1.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

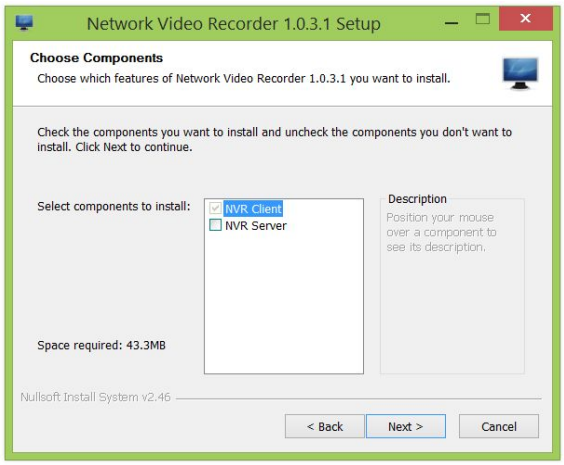
4.2. License Agreement

Read the license agreement carefully And then click “ I Agree” button.


Network Video Recorder 1.0.3.1 Setup
License Agreement
Please review the license terms before installing Network Video Recorder 1.0.3.1.
Press Page Down to see the rest of the agreement.
Copyright (c) 2013 Copyright reserved.
Warning: This product contains the original software under the terms of the license agreement Is approved for use are protected by copyright law and international treaties. This program Unauthorized reproduction or distribution in any manner is strictly regulated by civil and criminal law And will be prosecuted.
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Network Video Recorder 1.0.3.1.
Nullsoft Install System v2.46
< Back
I Agree
Cancel

4.3. Choose Components

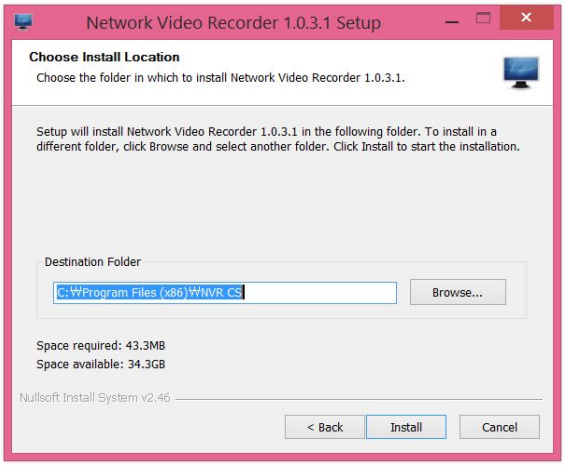
Choose the components you want to install. Click “**Next**” to continue.


Network Video Recorder 1.0.3.1 Setup
Choose Components
Choose which features of Network Video Recorder 1.0.3.1 you want to install.
Check the components you want to install and uncheck the components you don't want to install. Click Next to continue.
Select components to install:
NVR Client
NVR Server
Description
Position your mouse over a component to see its description.
Space required: 43.3MB
Nullsoft Install System v2.46
< Back
Next >
Cancel

Note. To install all components as standalone type, in one computer, please click “ NVR Server”.

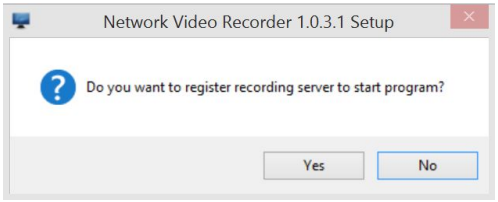
Choose Install Location

Define the destination folder and click "**Install**" button.
(Default folder is C:\Program Files\NVR CS)


Network Video Recorder 1.0.3.1 Setup
Choose Install Location
Choose the folder in which to install Network Video Recorder 1.0.3.1.
Setup will install Network Video Recorder 1.0.3.1 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:₩Program Files (x86)₩NVR CS
Browse...
Space required: 43.3MB
Space available: 34.3GB
Nullsoft Install System v2.46
< Back
Install
Cancel

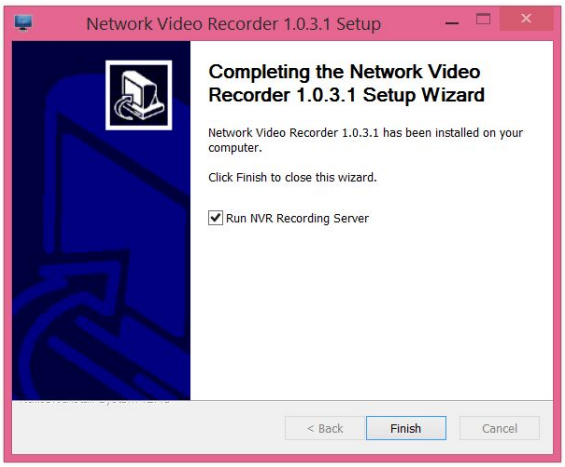
4.4. Registering NVR Server in the Windows Startup program.

If you choose the NVR Server of components, the popup window for Startup registry will appear. Then Click "**Yes**" Button to register it to Startup program.



4.5. Installation Completion

Upon completion, you can run NVR Recording Server by clicking "**Finish**" button with checked on the check box of **Run NVR Recording Server**.


Network Video Recorder 1.0.3.1 Setup
Completing the Network Video Recorder 1.0.3.1 Setup Wizard
Network Video Recorder 1.0.3.1 has been installed on your computer.
Click Finish to close this wizard.
Run NVR Recording Server
< Back
Finish
Cancel

After installation completion, 6(six) shortcut icons will be created on Desktop as follows;

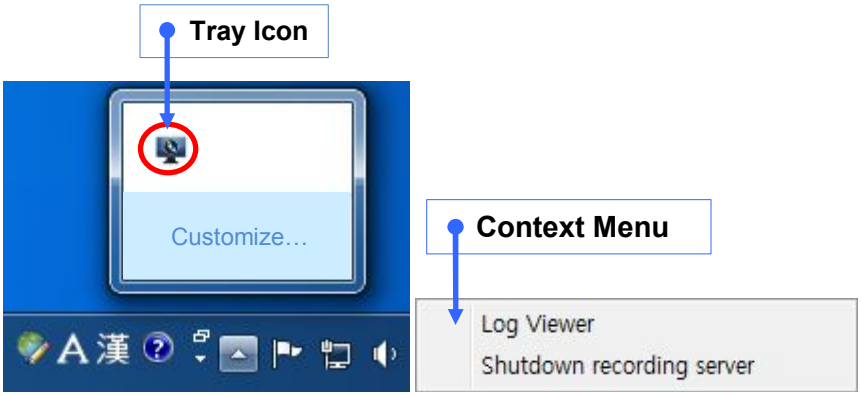
Uninstalling NVR CS,

To uninstall NVR CS, you can run uninst.exe on the below location/ way.
Start-up Menu➔All Programs➔NVR CS➔Uninstall (uninst.exe)
In the **control panel**→ open **uninstall a program** → Network Video Recorder → Uninstall

5. NVR Server/ Watchdog

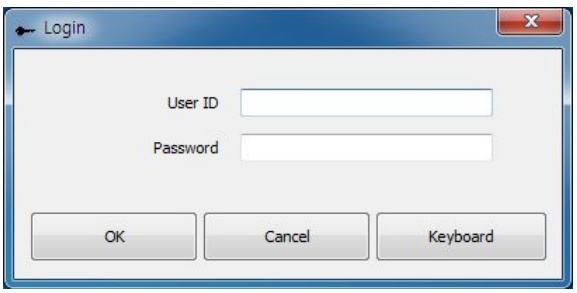
NVR Server's main roles are a Recording server and a Relay server. When the program runs, the icon [ ] is added to the notification area on the taskbar. It does not have its own separate UI. It runs in the background.

5.1. User Interface



(1) Select the [ ] icon and right click on it to open the context menu.

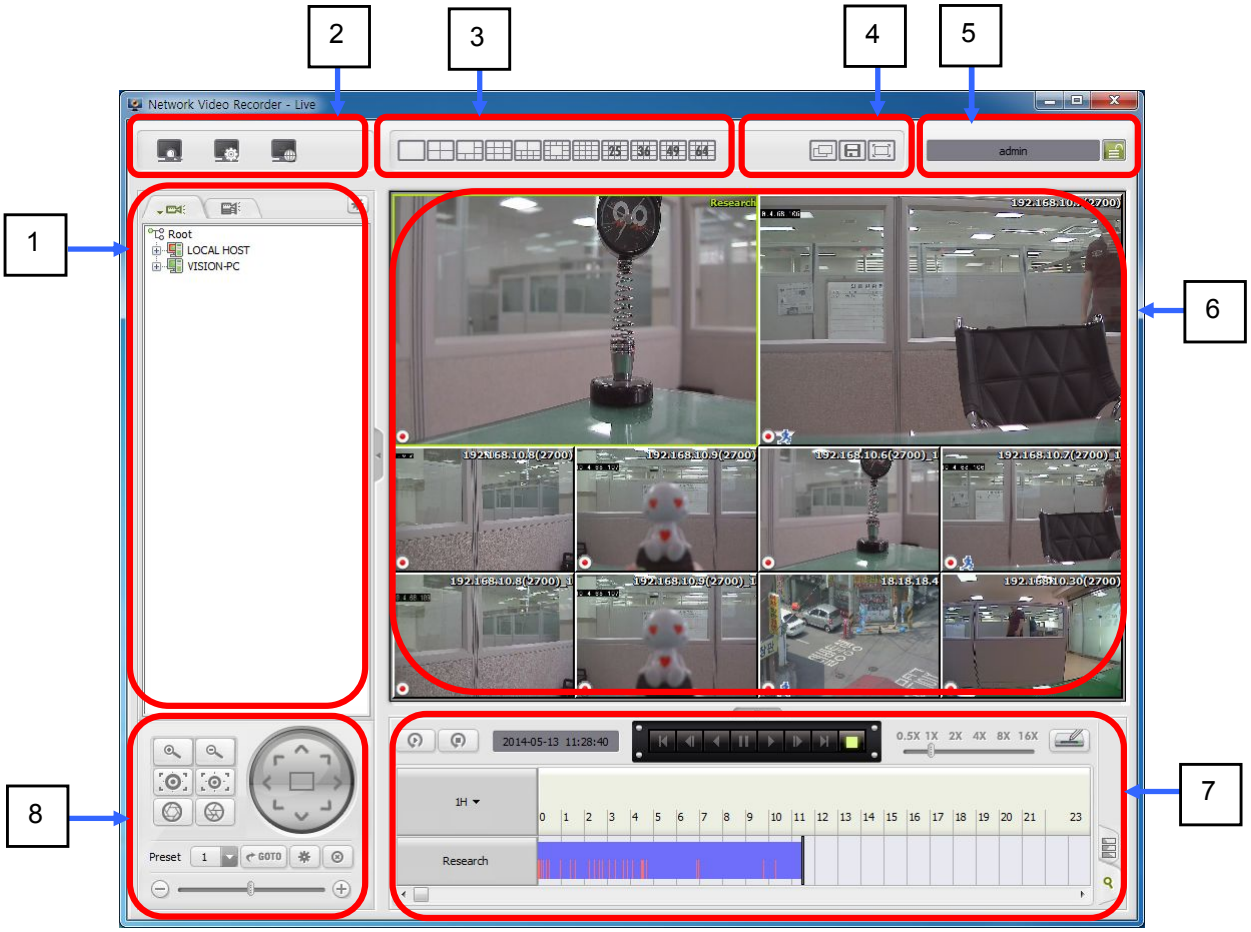
A. Log Viewer: shows log viewer of watchdog
B. Shutdown recording server: shuts down the NVR Server program.



(2) Enter the ID and password and click "OK".

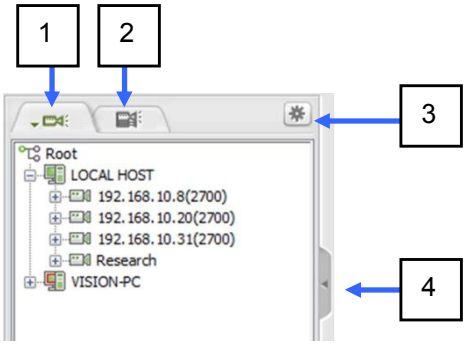
6. NVR Client Live

6.1. User Interface



No.	Item	Icon	Description
1	Server & Group List		Server List & Group List
2	Program Icons		Select components to switch.
			NVR Playback
			NVR Setup
			NVR E-map
3	Display mode		Selects the desired screen channel
4	Function Button (Screen mode)		Dual Screen mode
			Snapshot Saving & Print
			Full Screen mode
5	Login info		Shows Login Info (Log in/out)
6	Display screen		Shows all desired
7	Timeline		Playback the recorded data
8	PTZ Control		Can control PTZ cameras remotely

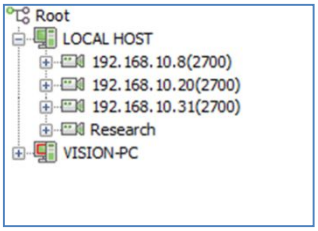
6.1.1. Status Window and Server List



No.	Icon	Item
1		Server List
2		Group List
3		Option Setup
4		Status Window

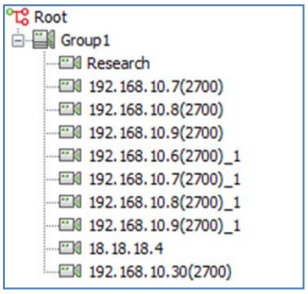
6.1.1.1. Server List

Shows registered servers and their status



6.1.1.2. Group List

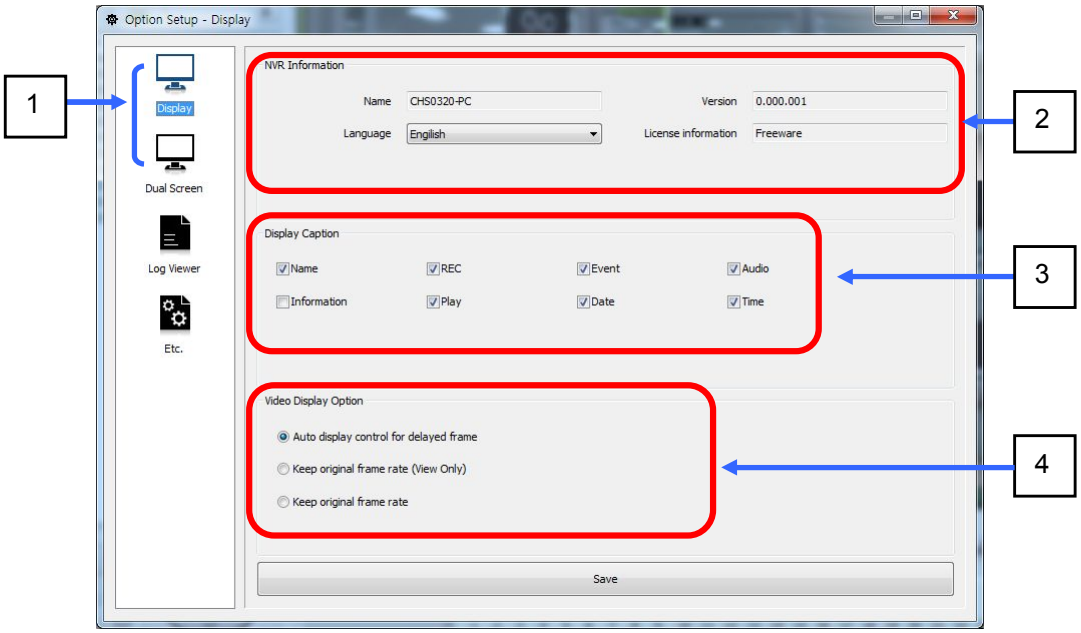
Shows Registered Groups and their status.



6.1.1.3. Option Setup

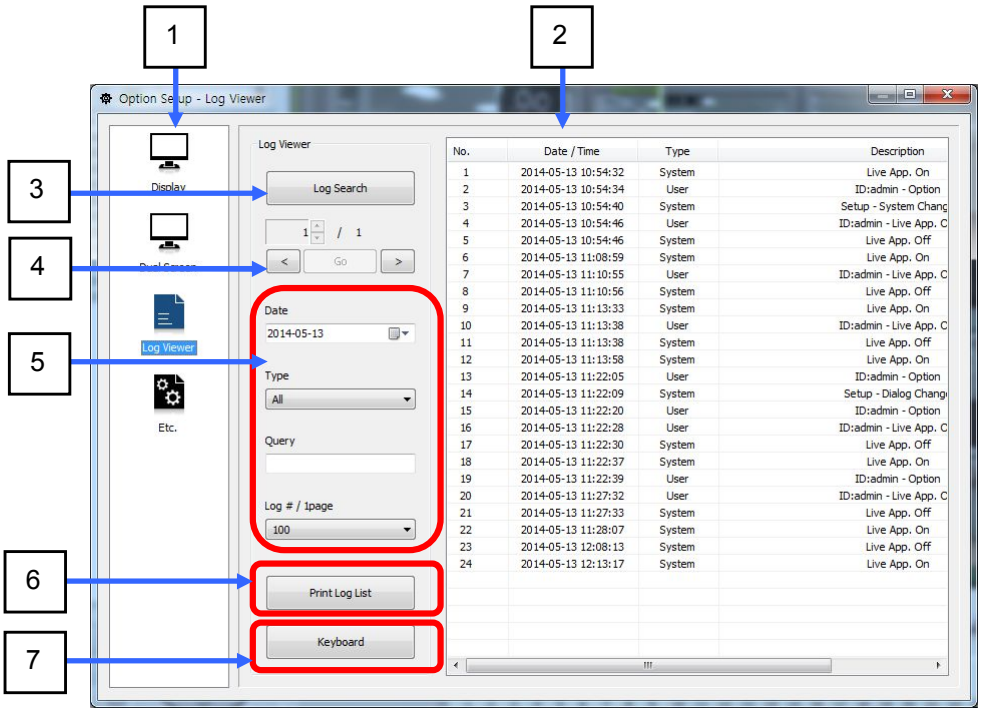
Click Option [ ] button. Setup Window appears.

Display Setup Window



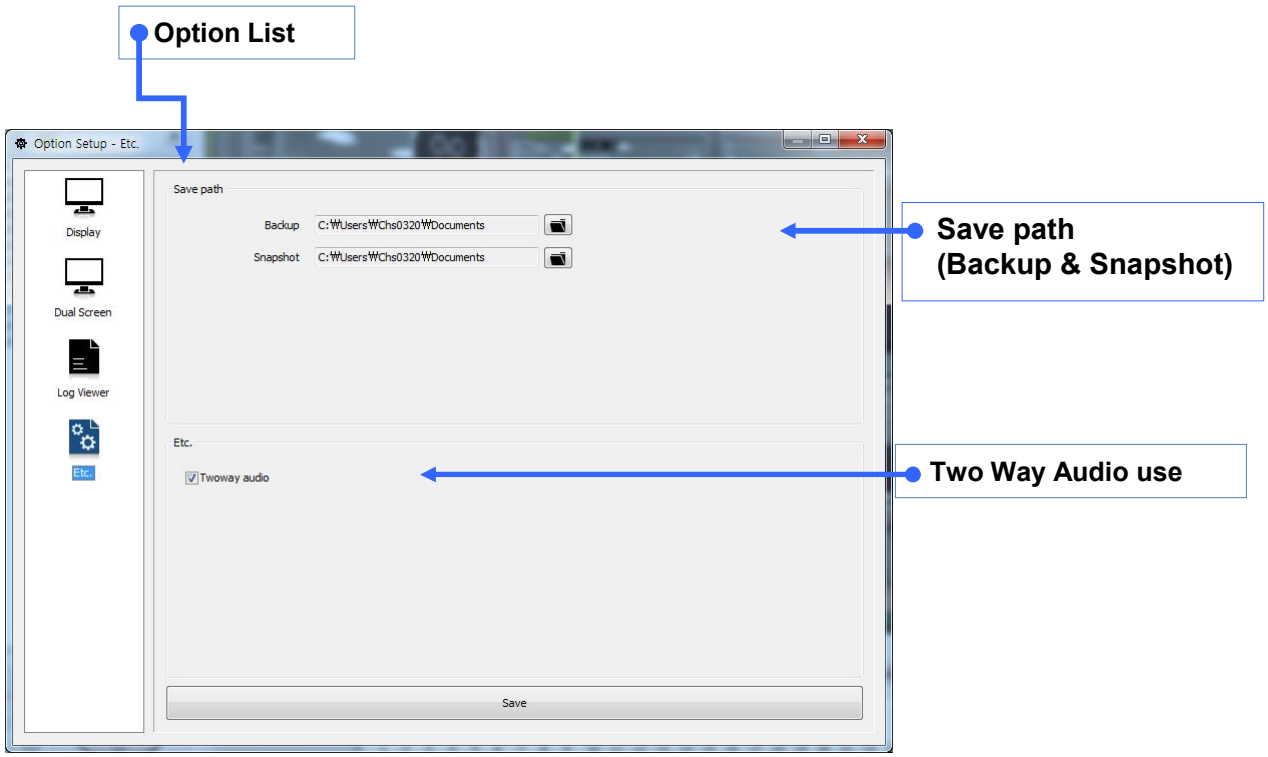
No.	Item		Description
1	Option List		Display
		Dual Screen	Dual Screen
2	Information Language		Changes Language
3	Display Caption		Sets up the captions
4	Video Display		

Log Viewer Window



No.	Item	Icon	Description
1	Option List		Log Viewer
2	Log List		Shows the log list
3	Log Search		Searches list of
4	Page Selection		Turns to the selected page
5	Date, Type, Query		Choose Search types
6	Print Log List		Print the searched list
7	Keyboard		On-Screen Key Board

Etc. Window

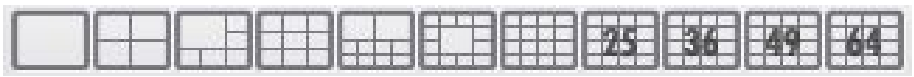


6.1.2. Program Icons

NVR Live	:	shows real-time live video for monitoring
NVR Playback	:	you can search and play back recorded data
NVR Setup	:	you can set up / configure Network Video Sever
NVR Event viewer	:	Shows live video when events triggered
NVR E-Map	:	Displays live video and Alarms on user's defined map when events triggered.

6.1.3. Display Mode

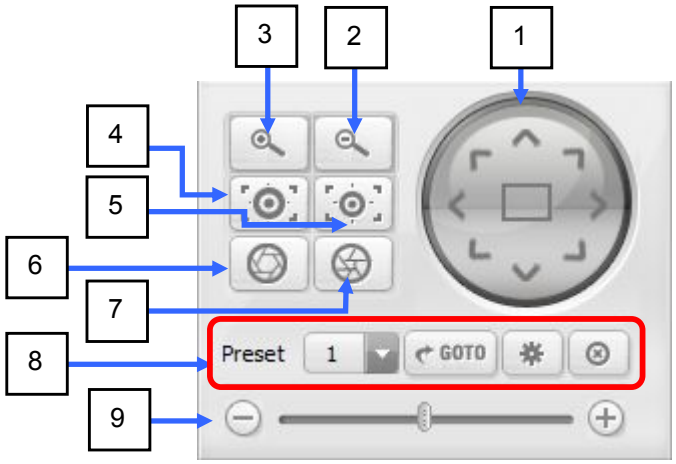
You can set the modes: 1/4/6/9/10/11/16/25/36/49/64 channel mode



6.1.4. Display Screen

No.	Item/ Icon	Description
1	Camera Name	Shows the name of camera
2		Recording in progress
		The status of Audio output
		The status of Microphone
		When Motion event is detected
		Alarm In/Out

6.1.5. PTZ Control



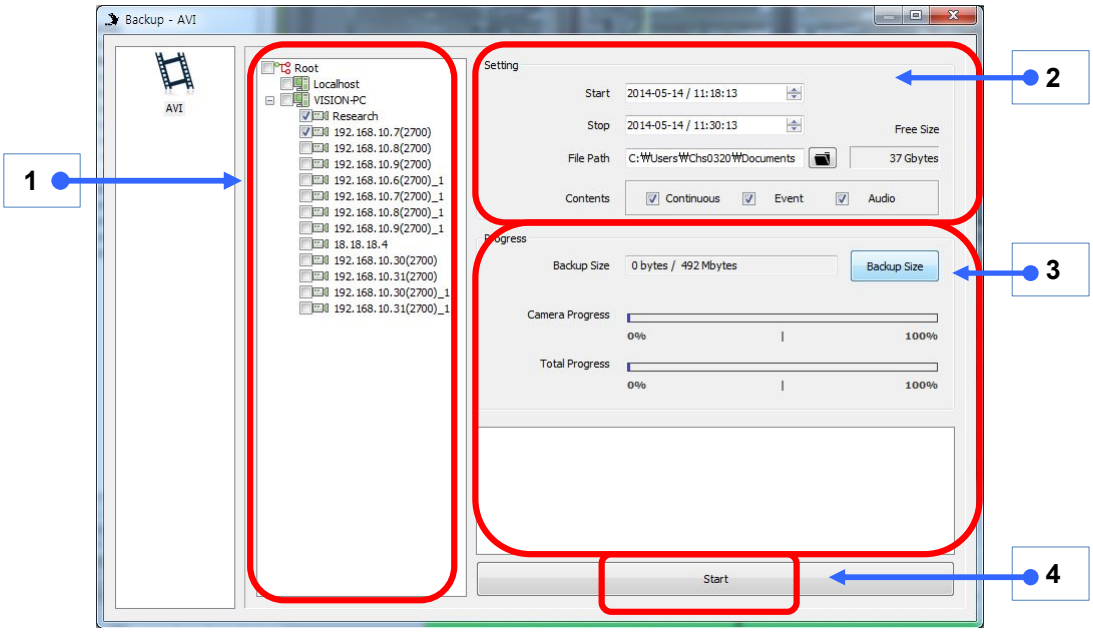
No.	Item	Icon	Description
1	PTZ Jog		Adjusts the selected position and Controls PTZ operation/menu.
2	Zoom out		Zooms out to smaller image
3	Zoom in		Zooms in to bigger image
4	Focus in		Adjust the focus range to closer distance
5	Focus out		Adjusts the focus range to further distance
6	Iris Open		Sets to Smaller F number for more light exposure
7	Iris Close		Sets to higher F number of Iris for less light exposure
8	Preset set-up	1	Select Preset Number
		GOTO	Go to Preset Number
			Saves a Preset
			Clears Preset
9	PTZ Speed		Controls PTZ Speed (Slow or Fast)

6.1.6. Time Line & PTZ Panorama

No.	Item	Icon	Description
1	Sync all		Synchronizes all on-screen playback to the time of a searching camera
2	Stop all		Stop all playback
3	Playback time & Control	2014-05-13 12:52:45	Shows the payback point of time in the time line
			Pause / Stop playback
			Backward Playback/ Forward Playback
			Backward one frame / Forward one frame
			Moves to the first frame/ Moves to the last frame
4	Playback Speed	0.5X 1X 2X 4X 8X 16X	Sets the speed to 0.5x, 1x, 2x, 4x, 8x, 16x.
5	Backup		Opens Backup set-up Window (The final backup file format is “*.avi” format.)
6	Panorama		Use scanned 360 Panoramic image for easy PTZ control
7	Timeline		Use the time line of Searching Data Grid
8	Research		Shows the name of camera

6.1.6.1. How to backup Search Dada

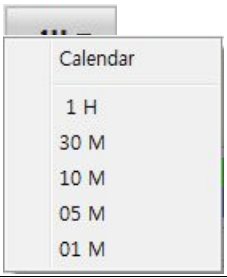
1) Select Cameras from the list
2) Specify the desired time from the Setting section.
   Start/stop time, File Path & Contents types (continuous, Event, Audio)
3) Click “Backup size” button for checking the backup size.
4) Click “Start” button.



6.1.6.2. How to Search Data Grid

Displays the recorded data of the desired camera in the search grid. Drag the black line to a desired point of time to playback.

1) **Search Time Scale**
You can choose Calendar, timeline scale for Search Grid
Calendar, Scale
Calendar, Scale:
(1 hour, 30 minutes, 10 minutes, 5 minutes, 1 minute)



2) **Recording status**

Color		Description
	Blank with no colored bar:	No recorded data
	Continuous recording with blue bar	shows the recorded data of continuous recording.
	Audio recording with Green bar	shows Audio recorded data
	Event recording with Red bar	shows the recorded data point when event triggered

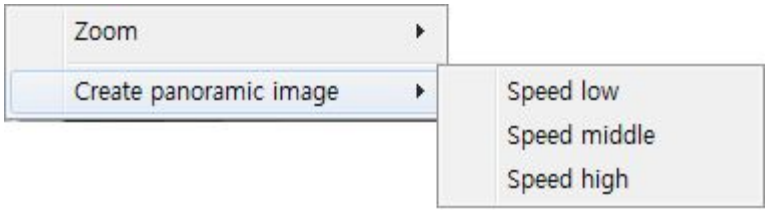
3) **In the search data grid,** the black vertical line is the current playback point of time

6.1.6.3. PTZ Panorama

(limited to the PTZ panorama supporting PTZ cameras)

On the PTZ Panorama 360 degree image, you can click at the desired position to move a PTZ camera.

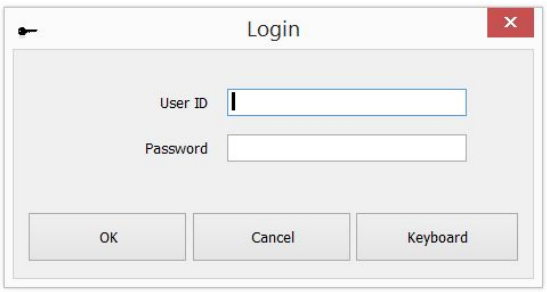
To create the PTZ panorama 360-degree image, right click on the image to open the context menu. There are three speed steps (low, middle, high) to scan 360-degree. Lower speed is higher image quality.



6.1.7. Login Information

You can click the [Log off] button and enter the User ID and password in the login window:

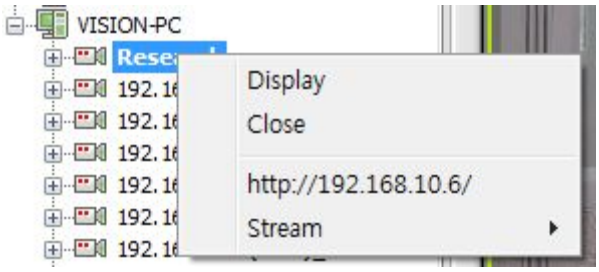
After login [ ] , the ID will be displayed



6.2. Server/Group List and Display Menu

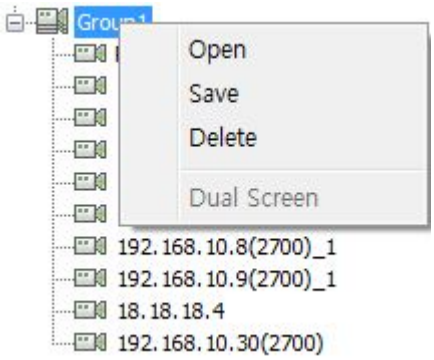
6.2.1. Server List Menu

Context	Description
Display	Display videos on the screen
Close	Close videos on the screen
http://	Open the web page of the cameras
Stream	Auto control of delayed frames Or Fixed channel setup



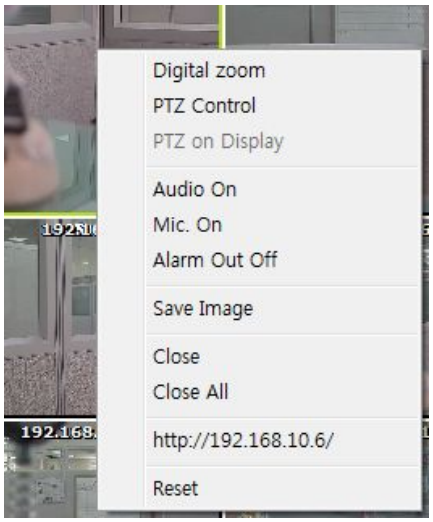
6.2.2. Group List Menu

Context	Description
Open	Display groups on the screen
Save	Saves groups on the screen
Delete	Deletes groups
Dual screen	Display groups on the dual screen

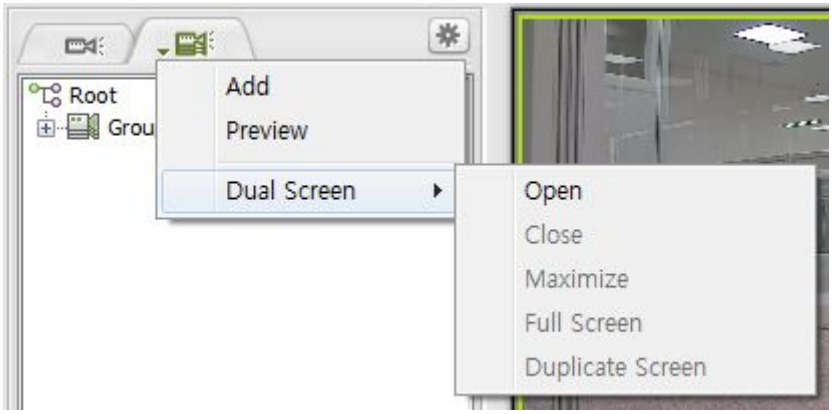


6.2.3. Display Screen Menu

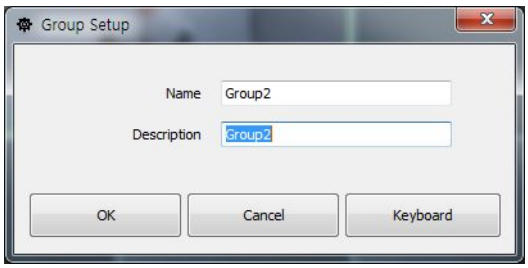
Context	Description
Digital zoom	Provides enlarging the video image by drag (returns to its original size, click on display)
PTZ Control	Controls PTZ on display (supports for only PTZ Cameras)
PTZ on Display	Moves to the "Mouse click" position (supported model only)
Audio On/Off	Turns on or off Audio
Mic. On/Off	Turns on or Off Mic.
Alarm Out On/Off	Turns on or off Alarm Out
Save Image	Saves or prints Snapshot Image
Close	Closes the display screen
Close All	Closes all the display screens
http:// ~ /	Moves to the webpage of the camera
Reset	Moves to the previous display.



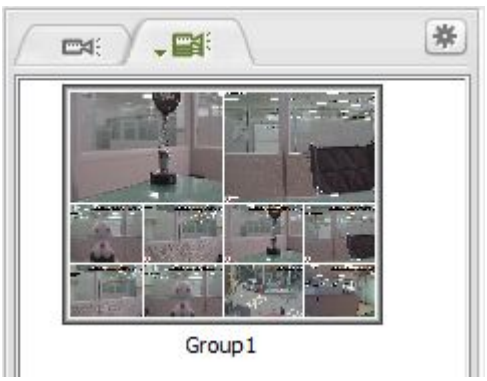
6.2.4. Group Main Menu



Context	Description
Add	Adds a group
Preview	Displays groups to a preview icon
Dual Screen	Controls Dual screen options Open Close Maximize Full Screen Duplicate Screen



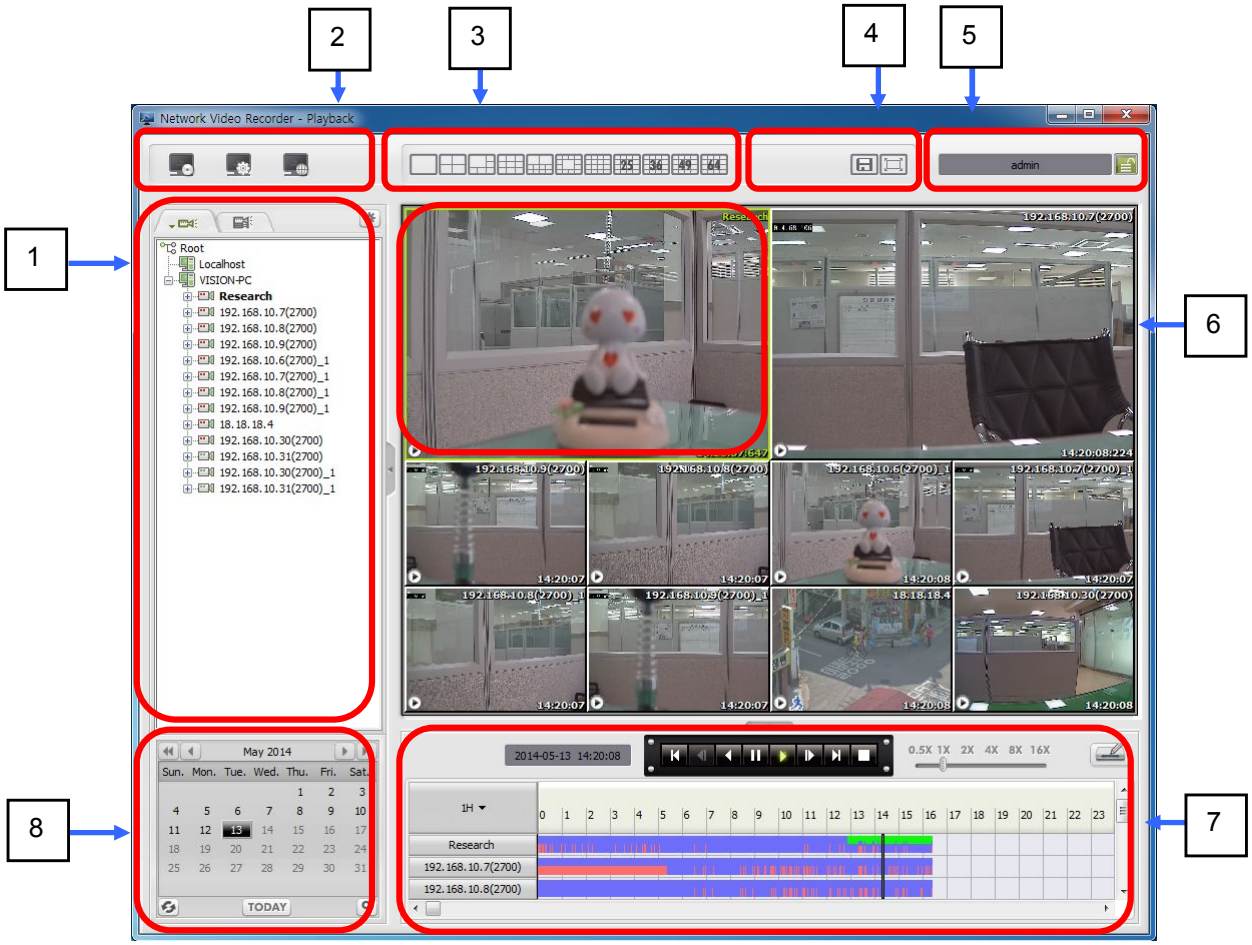
< Group Setup Window>



<Icon of group preview>

7. NVR Client Playback

7.1. User Interface



No.	Item	Icon	Description
1	Server & Group List		Server List & Group List
2	Program Icons		Select Components to switch.
3	Display modes		Selects the desired screen channel
4	Function Button (Screen modes)		Snapshot Saving & Print/ Full Screen mode
5	Login info		Shows Login Info (Log in/out)
6	Display		Shows all desired
7	Timeline		Playback the recorded data
8	Calendar		Playback the recorded data

All the features of NVR Client playback are almost the same of NVR Client Live.
The differences are;

Display/ Close screens are available only on the [ ] stop playback .
On the search grid, all the timeline of display cameras are listed.
Playback all the cameras simultaneously. (Independently in NVR Client Live)
After screens being configured, select the date from the calendar.

8. NVR Client E-Map

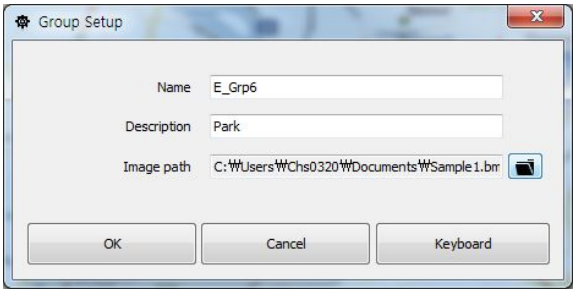
8.1. User Interface

No.	Item	Icon	Description
1	Program Icons		Selects Components to switch.
2	E-map Manager		Creates new E-map Group
			Opening /Editing E-map Group
			Locks E-map Group (Monitoring mode)
			Unlocks E-map Group (Editing mode)
3	Function Button		Full Screen mode
4	Login info		Shows Login Info (Log in/out)
5	Server List		Server List & E-map Item
6	PTZ Control		Can control PTZ cameras remotely
7	E-map Group List		Shows the saved E-map group.
8	E-map Screen		E-map Screen

8.2. E-map Group

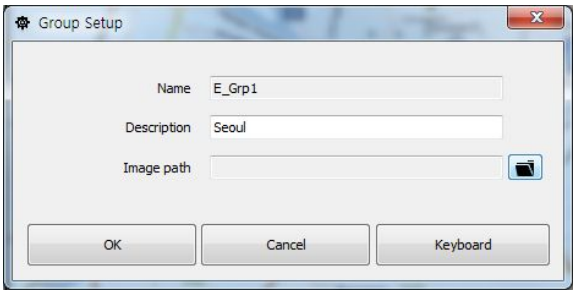
8.2.1. To add E-map Group

1. Click [ ] button to create new E-map.
2. In the Group Setup window, enter Name & Description and define Image path by clicking [ ] button.
3. Click [OK] button and then the new E-map will appear on the E-map Group List



8.2.2. To edit E-map Group

1. Click [ ] button to edit Description or Image of E-map Group. (Enter Description or click [ ] button to change Image Path)
2. Click [OK] button



8.2.3. To lock or unlock E-map Group

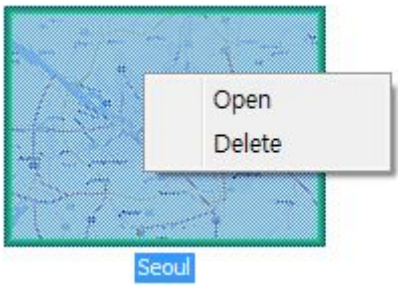
You can click Lock [ ] button or Unlock [ ] button to switch the E-map mode.

Monitoring mode	Editing mode

Note. In the Editing mode, [ ] button and [ ] button are deactivated.

8.2.4. To open/ delete E-map

1. Double click to open an E-map in the E-map Group list.
2. Or, click right mouse button on it to open context menu.
3. You can open or delete the E-map.

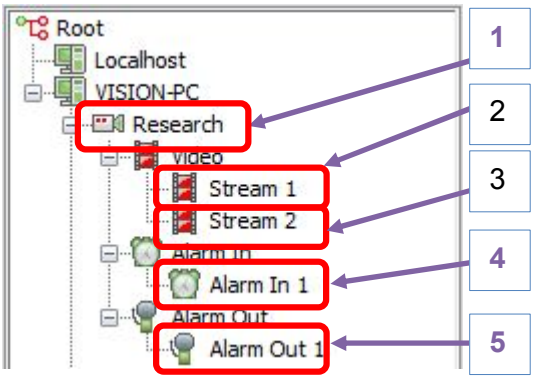


8.3. E-map Items

To add/ edit/ delete items (Camera, Stream1, Stream2, Alarm In, Alarm Out) is only available in the Editing [ ] mode.

8.3.1. To add items to E-map

1) Click an item and drag it to the E-Map.
2) Drop onto the desired position.



No.	Icon	Item
1		Camera
2		Stream1 (Display)
3		Stream2 (Display)
4		Alarm In 1
5		Alarm Out 2

8.3.2. To edit/delete items on the E-map

You can move an item on the E-map by drag-n-drop. And you can delete it by context menu (right mouse button)

No.	Icon	Item
1		Camera
2		Stream1 (Display)
3		Stream2 (Display)
4		Alarm In 1
5		Alarm Out 2

For Display items, Stream1, Stream2, or Pop-up display, you can move/resize a display. Click right mouse button to open context menu to Delete item or set up Event link or Dwell time setting.

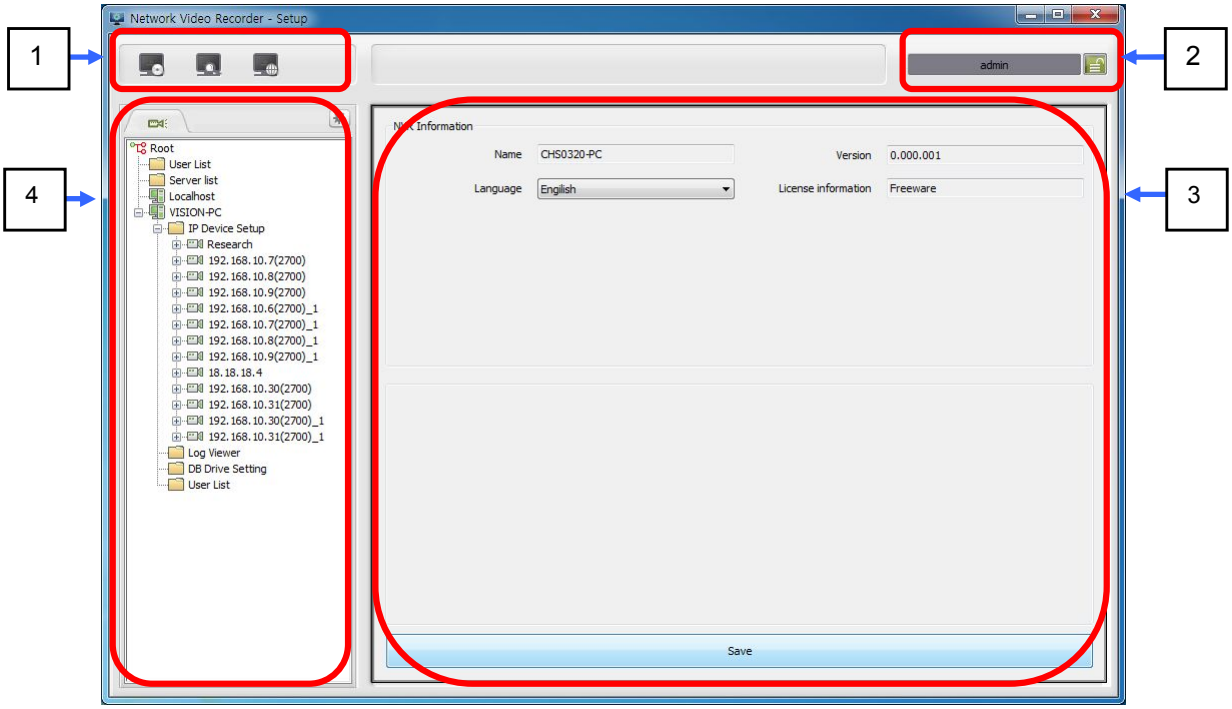
Context menu	Description
Delete item	
Event link	Motion, Alarm In, Alarm Out
Dwell time	Continuous, 5sec, 10sec, 30sec, 60sec

8.3.3. To save items to E-map

1) To save E-map, click [ ] button and it will be switched to [ ] button.
2) In a confirmation pop-up window, click [OK] button.

9. NVR Client/Server Setup

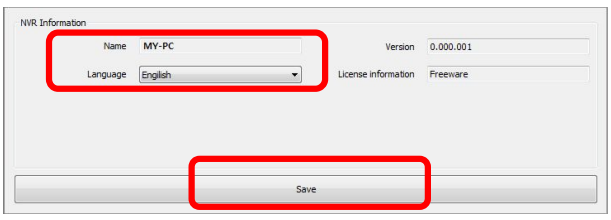
9.1. User Interface



No.	Items	Icons	Description
1	Program Icons		Selects Components to switch.
2	Login info		Login buttons
3	Setup Window		Setup Window for detailed setup
4	Server List and Setup Menu	Root	NVR information & Display Language
		User List	Register users of NVR Server & Permission
		Server list	Registers/ Adds NVR Servers
		VISION-PC	Shows NVR Sever System
		IP Device Setup	Adds/Edits/Deletes IP Devices
		Log Viewer	Views Log information of NVR Server
		DB Drive Setting	
		User List	

9.2. NVR Information (Root)

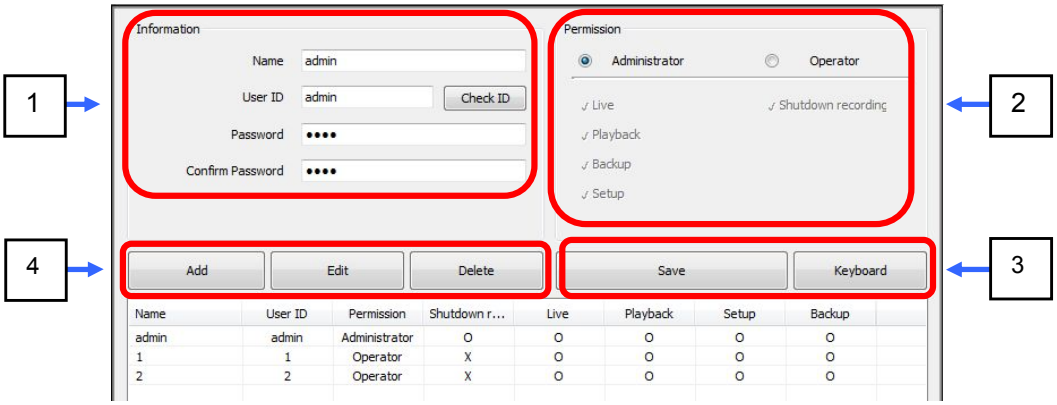
: NVR information & Language setup



1). Click [Root] and it displays NVR information & Current display language.
2) You can set the language for NVR.
Available languages: English/ Korean/ Russian/ Spanish/ Portuguese/ Czech/ Japanese/ Italian
3) After the language is checked, click [Save] button to save it to the NVR Client.

9.3. User List (User List)

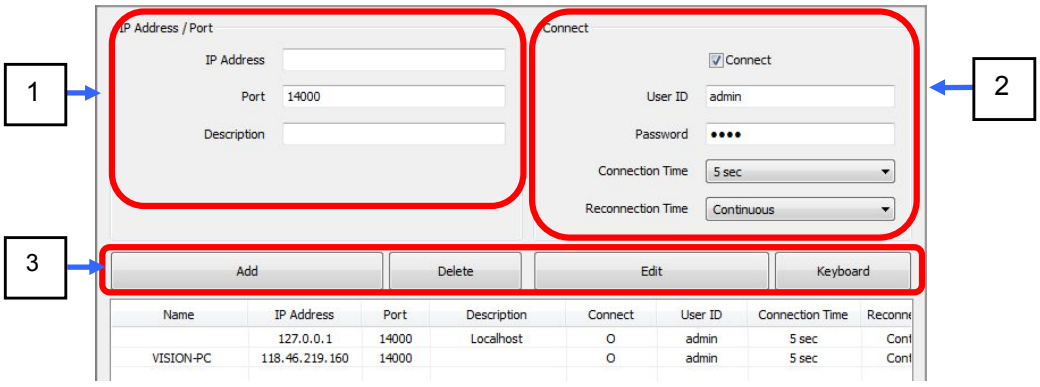
You can register users to the user list of NVR.



No.	Items	Description
1	Information	Name, User ID, Password, Confirmation Password
2	Permission (management)	Administrator: has all permissions Operator: its permission can be specified; Live/ Playback, Backup/ Setup/ Shutdown recording
3	Add/ Edit/ Delete	Adds/ Edits/ Deletes the selected users
4	Save	Saves User's list to NVR client

9.4. Server List (Server list)

It is used to register NVR Sever/Client Server (IP Address, User ID & Password)



No.	Items	Description
1	IP Address/ Port	Set IP Address, Port & Description of NVR Server
2	Connection setting	Server connection information (User ID, Password, Connection Time, Reconnection Time)
3	Add Server	Adds/ Edits/ Deletes the desired sever from Server list

9.5. NVR Sever

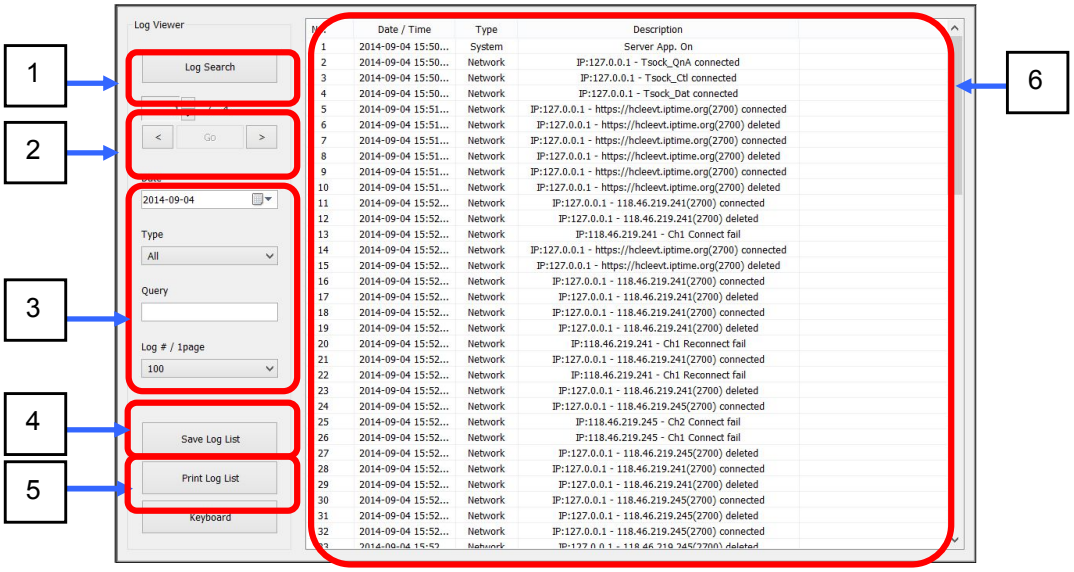
9.5.1. System Information (VISION-PC)

You can see the NVR system information.

No.	Items	Description
1	System Information Name	You can set a name for NVR Server
2	Network Server network adapter setup	Sets up when using dual network adapters.
3	Port Setup	NVR Server port setup

9.5.2. Log Viewer(Log Viewer)

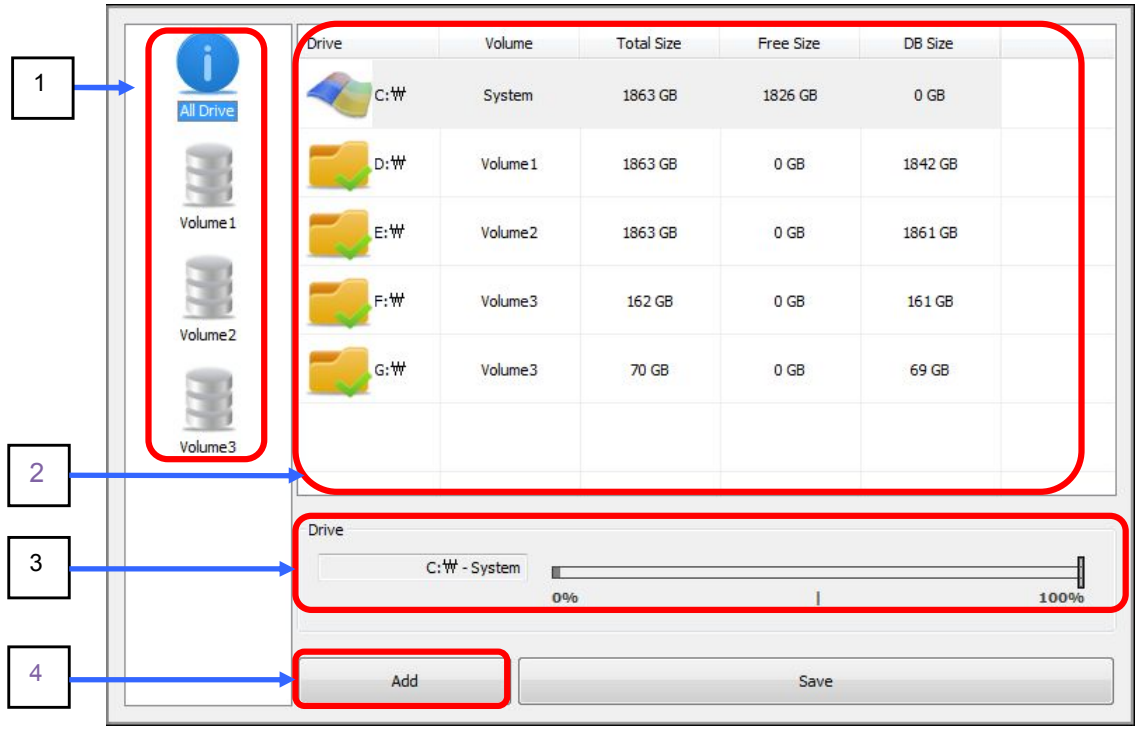
You can view all the log information (System, User, Network, Event) on the NVR Server and search them with various ways. And you can save or print the searched log list.



No.	Items	Description
1	Log Search	Search button
2	Page Search	Turns to the selected page
3	Select Date/ Log type/ Query	Choose Search types (Date, Log types, Query, Log # per page.
4	Save Log List	Saves log list
5	Print Log List	Print log list
6	Log List	Displays the log list

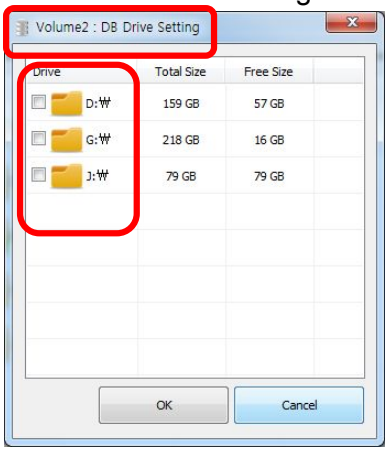
9.5.3. DB Drive Setting (DB Drive Setting)

You can set up DB Drive of NVR Server.



No.	Items	Description
1	Volume List	Shows Volume list
2	Drive List	Show DB Drive list
3	Drive information & Size Setting	Show the Volume information of Selected Drive and sets up the size of DB drive
4	Volume Add button	Add the volume.

Volume: a unit of recording database (DB) of NVR server. It is a bunch of Drives.
It is recommended to configure (set up) one physical Hard Drive into one Volume.
An O/S installed drive is excluded in the Volume configuration.
You can select a desired volume for recording by each camera/device individually. **It is for stable distributed recording of several cameras by volume.**



To add a volume
1) Click “Add” button.
2) The Volume Add window appears.
3) Select a desired Drive and click “OK” button.

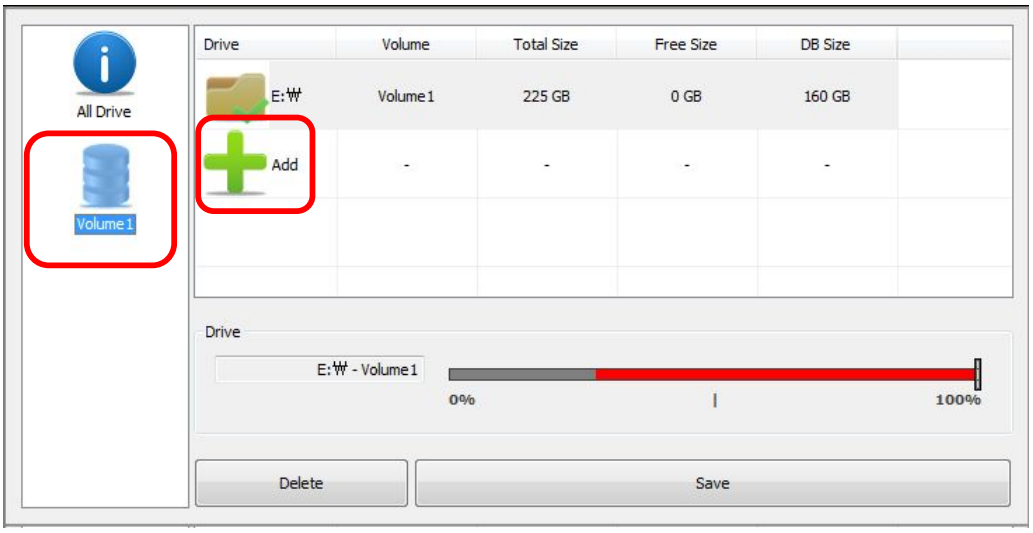
To Edit a Volume,

1) Select a volume of Volume list.

2) To add a drive, click the [ ] button and the Volume add window appears. Select a desired drive.

3) To delete a volume, select the volume. And click “Delete” button.

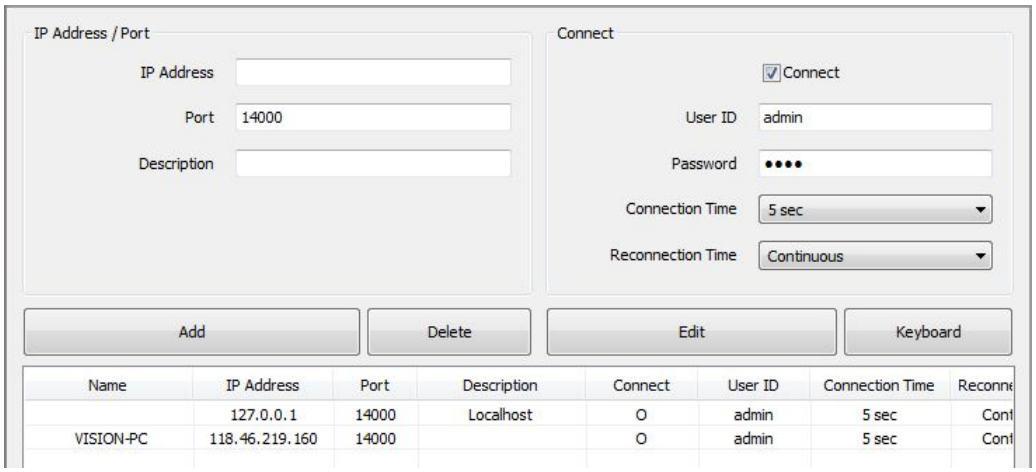
4) When done, click “Save” button to apply to NVR server.



9.5.4. User List of NVR Server (User List)

You can register the User group of Selected NVR Server/Client .

(the same-format window of User list of NVR Server)

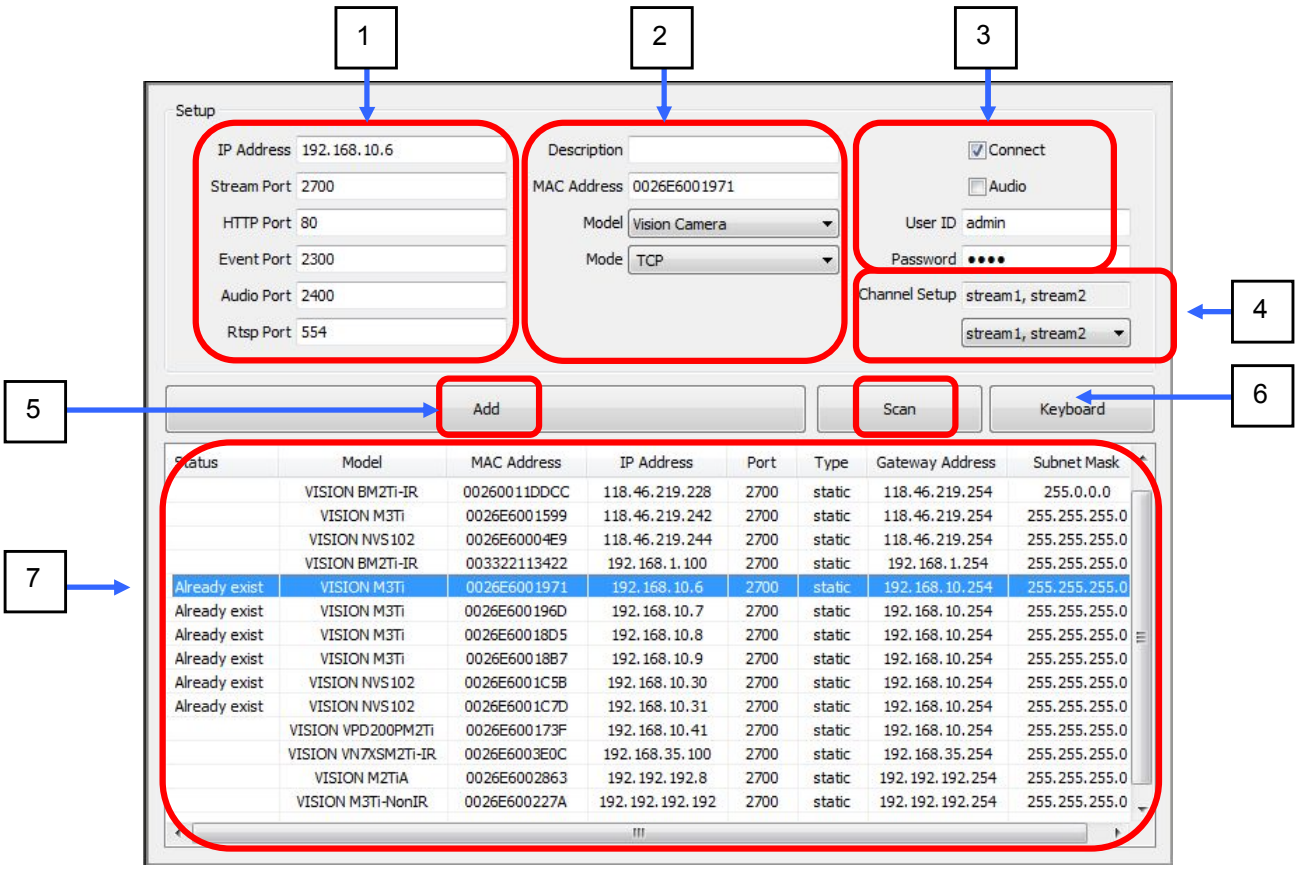


9.6. Camera

9.6.1. Adding IP Devices (Camera & Video Servers)

IP Device Setup : Searching and Adding IP Devices

Click “IP Device Setup” and then Setup window will appear.



No.	Items	Description
1	IP Address & Port	Sets up IP address and Port of IP Cameras
2	Camera Description & MAC address	Edit Description & MAC address
3	Camera ID & Password	Edit Camera ID & Password
4	Camera channel Setup	Sets up Streaming types of Channels
5	Camera Add Button	Add Camera
6	Scan Button	Displays Camera list
7	Scanned Device List	**Discovered device list** (When you select desired device from the list, the device information is displayed on the setup)

Caution:

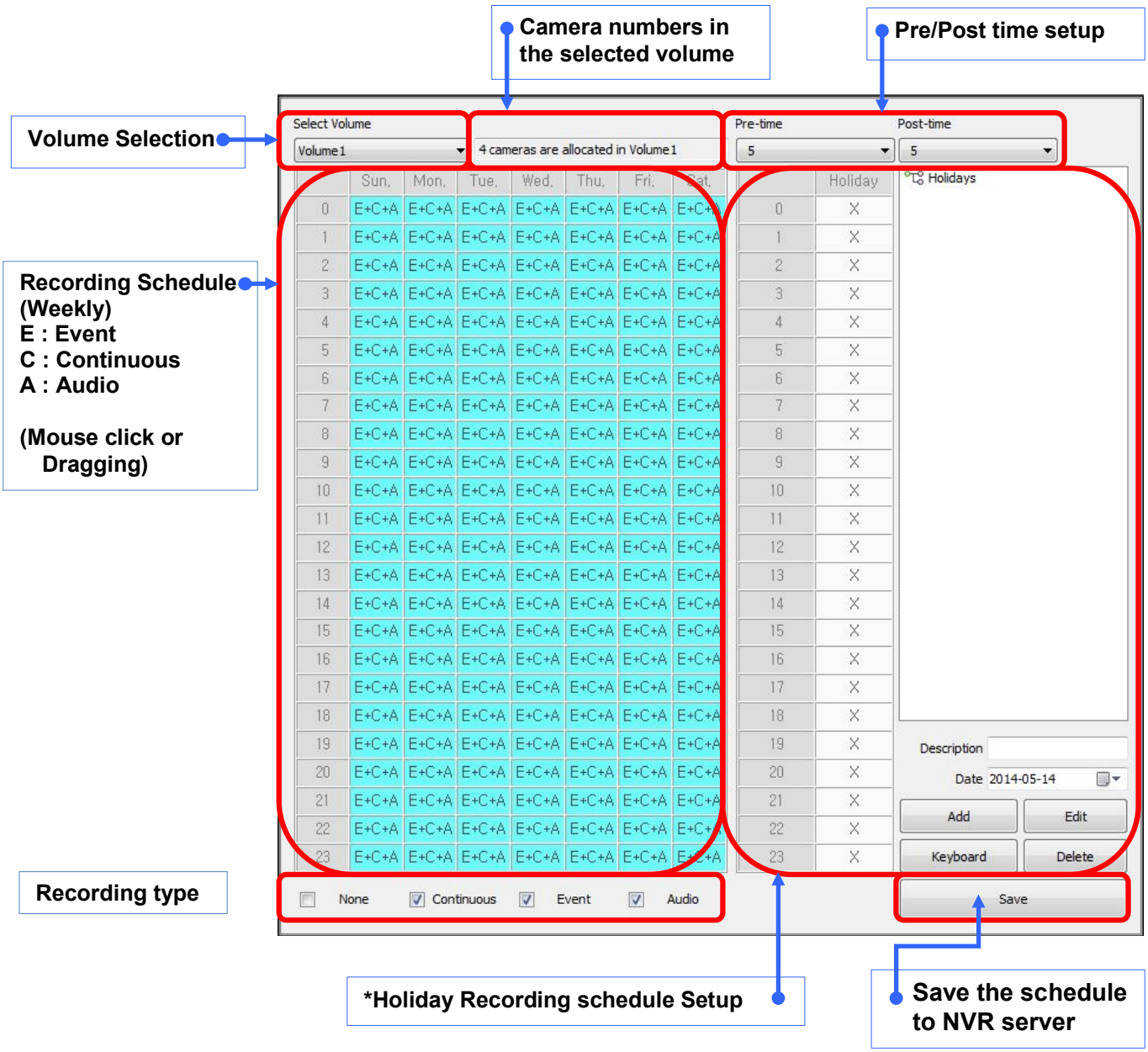
When you select a desired device from the discovered device list, all is set to “DEFAULT” except IP Address, Stream & HTTP Port, MAC Address and Model information.

9.6.2. Camera Setup

Research (IP address (Port)) or Description): You can edit information of a registered device
It has the same format of IP Device Setup. But, **IP Address, Stream Port** cannot be edited. In the bottom, the connected IP device video will be displayed.

9.6.3. DB Recording Channel Setup

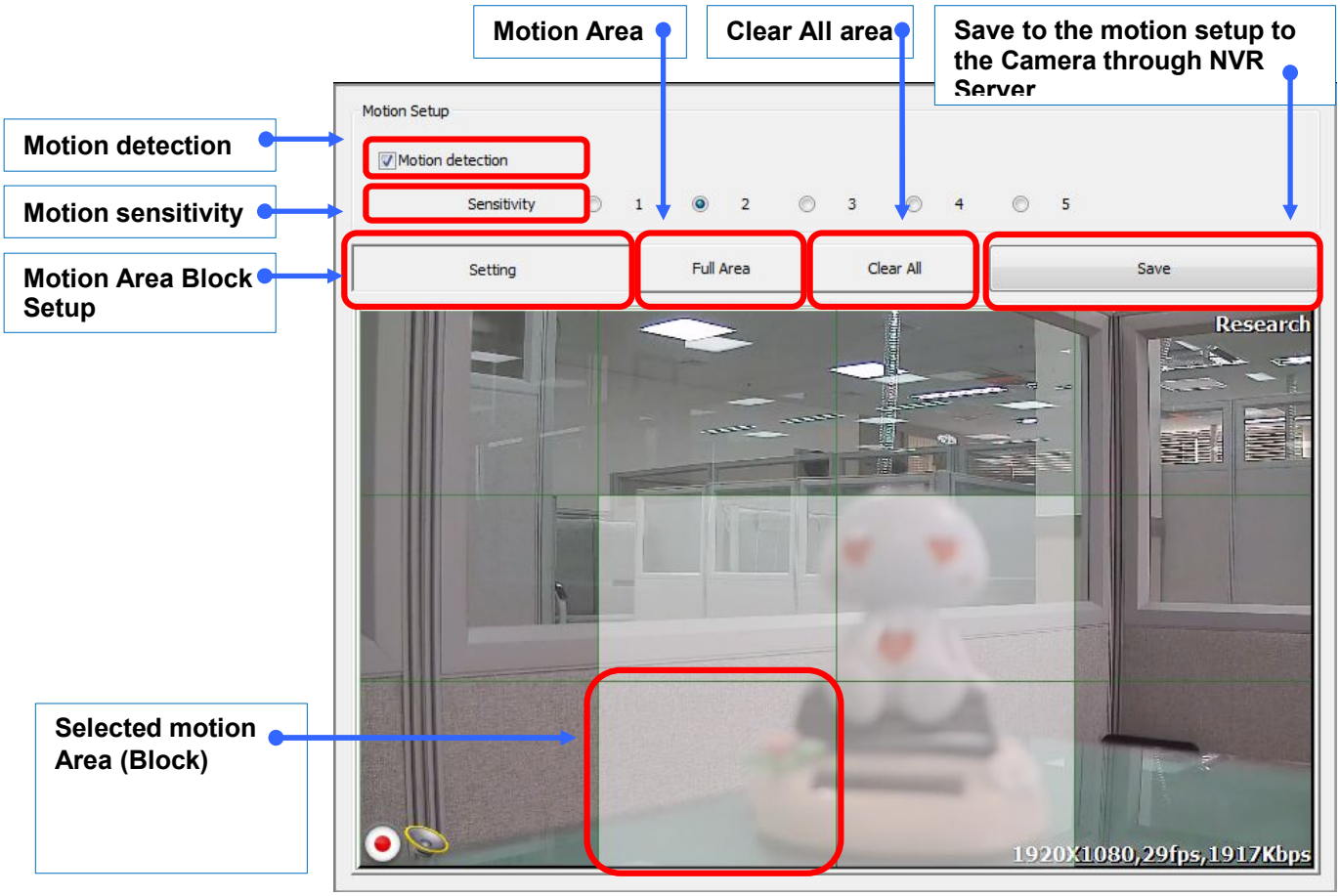
DB Recording Channel: It is to set up DB Recording by schedule.



* Holidays Recording schedule setup : You can add recording schedule for holidays by setting date, description

9.6.4. Motion Setup

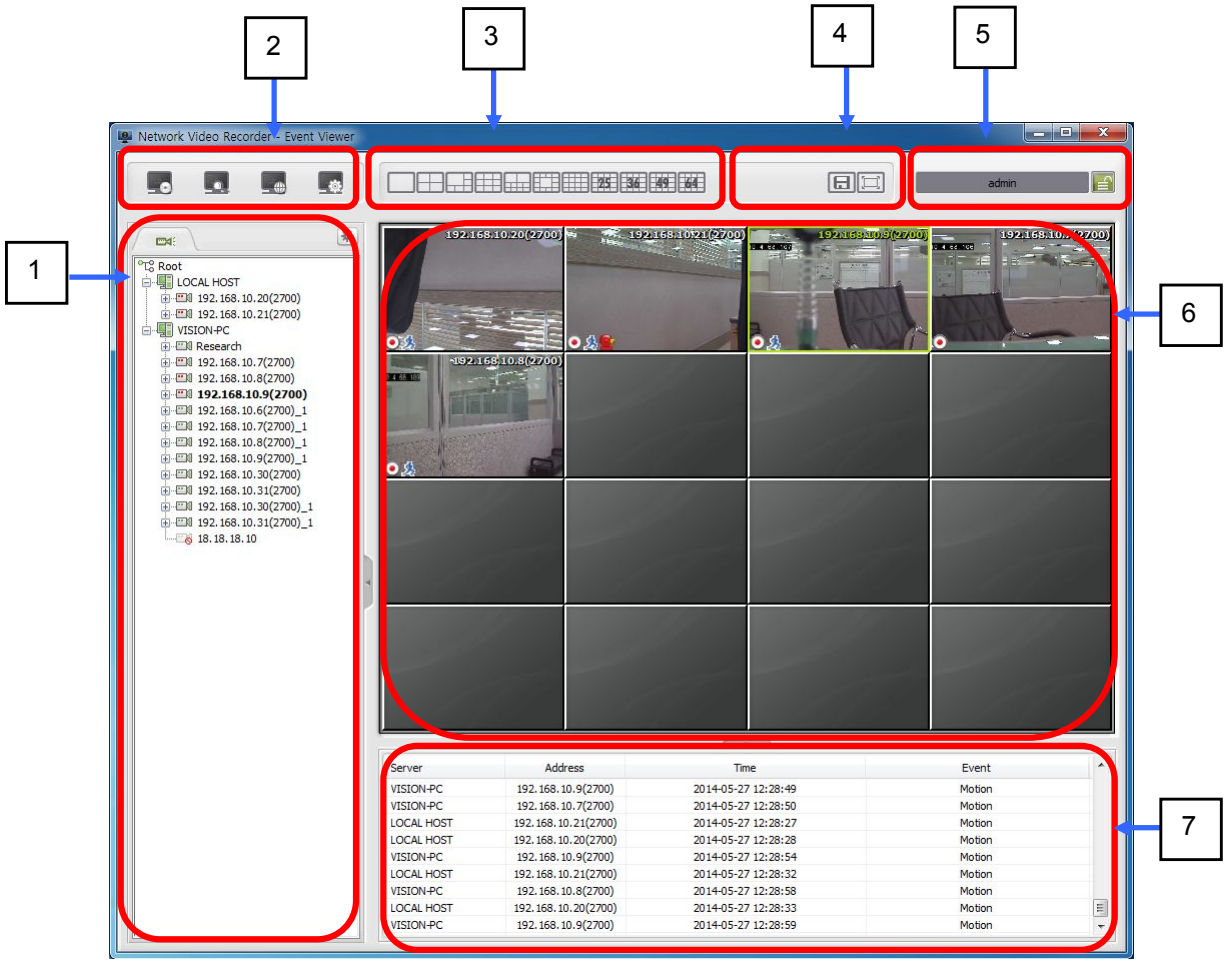
Motion Setup : Motion Area Setup Pane



You can select or delete Motion area by clicking the mouse and dragging.

10. NVR Client Event Viewer

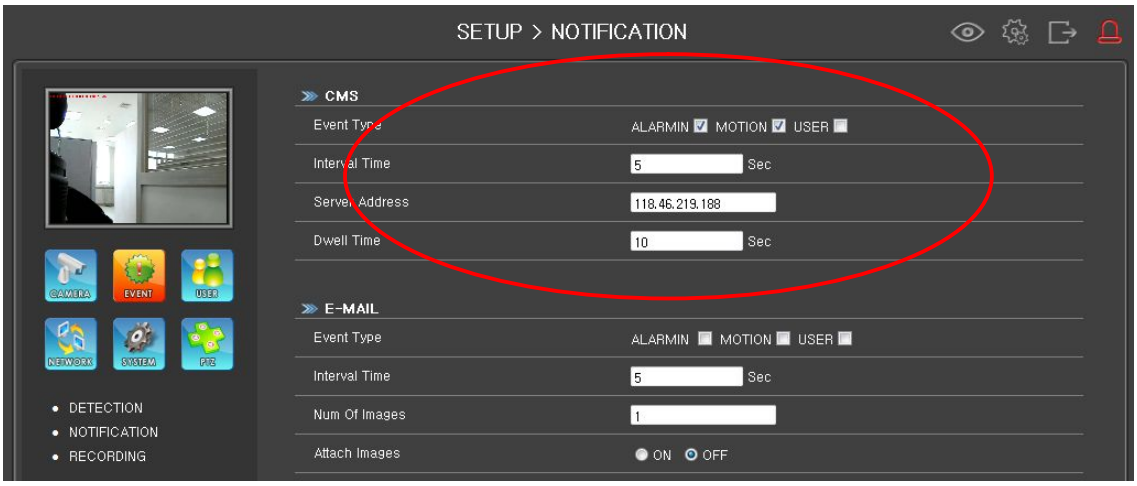
10.1. User Interface



No.	Item	Icon	Description
1	Server List		Server List
2	Program Icons		Select Components to switch
3	Display modes		Selects the desired screen channel
4	Function Button (Screen modes)		Snapshot Saving & Print
			Full Screen mode
5	Login info		Login / Logout
6	Display		Displays Event Triggered Video
7	Event Log		Show Event logs

10.2. Setup Event Viewer

A. Connect to an IP Camera (or device) and register Server Address of Event Viewer as follows;
Setup ➔ Even t ➔ Notification ➔ Check and enter related info on CMS
Event type: Alarm, Motion, User
Interval time: sec
Server Address: IP address of NVR Server
Dwell time: sec



B. When event triggered, its event info added to the Event log and it will appear on the display screen during the defined “Dwell time”.